UNITED STATES DEPARTMENT OF COMMERCE United States Patent and Trademark Office Address: COMMISSIONER FOR PATENTS P.O. Box 1450 Alexandria, Virginia 22313-1450 www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/599,883	11/29/2006	Catherine Coutey	BDL-76	5983
20311 LUCAS & MEI	7590 09/03/200 RCANTI, LLP	EXAMINER		
475 PARK AV		DUCHENEAUX, FRANK D		
15TH FLOOR NEW YORK, NY 10016			ART UNIT	PAPER NUMBER
			1794	
			NOTIFICATION DATE	DELIVERY MODE
			09/03/2009	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

info@lmiplaw.com

	Application No.	Applicant(s)				
Office Action Comments	10/599,883	COUTEY ET AL.				
Office Action Summary	Examiner	Art Unit				
	FRANK D. DUCHENEAUX	1794				
The MAILING DATE of this communication app Period for Reply	ears on the cover sheet with the c	orrespondence ad	dress			
A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION. - Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication. - If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication. - Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).						
Status						
1) Responsive to communication(s) filed on 12 Oc	ctober 2006.					
	action is non-final.					
3) Since this application is in condition for allowan	ce except for formal matters, pro	secution as to the	merits is			
closed in accordance with the practice under E	closed in accordance with the practice under Ex parte Quayle, 1935 C.D. 11, 453 O.G. 213.					
Disposition of Claims						
4)⊠ Claim(s) <u>1-11</u> is/are pending in the application.						
4a) Of the above claim(s) <u>9-11</u> is/are withdrawn from consideration.						
5) Claim(s) is/are allowed.						
6)⊠ Claim(s) <u>1-8</u> is/are rejected.						
7) Claim(s) is/are objected to.						
8) Claim(s) are subject to restriction and/or	election requirement.					
Application Papers						
9)⊠ The specification is objected to by the Examiner						
10) ☐ The specification is objected to by the Examiner. 10) ☐ The drawing(s) filed on 12 October 2006 is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.						
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).						
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d). 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.						
Priority under 35 U.S.C. § 119						
12)⊠ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f). a)⊠ All b)□ Some * c)□ None of:						
1. Certified copies of the priority documents						
Certified copies of the priority documents	have been received in Applicati	on No				
3. Copies of the certified copies of the prior	·	ed in this National	Stage			
application from the International Bureau	application from the International Bureau (PCT Rule 17.2(a)).					
* See the attached detailed Office action for a list of the certified copies not received.						
Attachment(s)						
1) Notice of References Cited (PTO-892) 4) Interview Summary (PTO-413) 2) Notice of Draftsperson's Patent Drawing Review (PTO-948) Paper No(s)/Mail Date						
3) 🔯 Information Disclosure Statement(s) (PTO/SB/08) 5) 🔲 Notice of Informal Patent Application						
Paper No(s)/Mail Date <u>10/12/2006</u> . 6) Other:						

DETAILED ACTION

Election/Restrictions

1. Restriction is required under 35 U.S.C. 121 and 372.

This application contains the following inventions or groups of inventions which are not so linked as to form a single general inventive concept under PCT Rule 13.1.

In accordance with 37 CFR 1.499, applicant is required, in reply to this action, to elect a single invention to which the claims must be restricted.

Group I, claim(s) 1-8, drawn to a product.

Group II, claim(s) 9, drawn to a process of using.

Group III, claim(s) 10-11, drawn to process of making.

The inventions listed as Groups I, II and III do not relate to a single general inventive concept under PCT Rule 13.1 because, under PCT Rule 13.2, they lack the same or corresponding special technical features for the following reasons: Centner et al. (US 2004/0097638) teaches all the limitations of independent claim 1. Therefore since the limitations of the claims fail to define a contribution over the cited prior art, they fail to constitute a special technical feature and thus, there is a lack of unity of invention between the claims.

2. During a telephone conversation with Donald Lucas on 7/30/2009 a provisional election was made with traverse to prosecute the invention of Group I, claims 1-8. Affirmation of this election must be made by applicant in replying to this Office action. Claims 9-11 are withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

- 3. Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a request under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).
- 4. The examiner has required restriction between product and process claims. Where applicant elects claims directed to the product, and the product claims are subsequently found allowable, withdrawn process claims that depend from or otherwise require all the limitations of the allowable product claim will be considered for rejoinder. <u>All</u> claims directed to a nonelected process invention must require all the limitations of an allowable product claim for that process invention to be rejoined.

In the event of rejoinder, the requirement for restriction between the product claims and the rejoined process claims will be withdrawn, and the rejoined process claims will be fully examined for patentability in accordance with 37 CFR 1.104. Thus, to be allowable, the rejoined claims must meet all criteria for patentability including the requirements of 35 U.S.C. 101, 102, 103 and 112. Until all claims to the elected product are found allowable, an otherwise proper restriction requirement between product claims and process claims may be maintained.

Withdrawn process claims that are not commensurate in scope with an allowable product claim will not be rejoined. See MPEP § 821.04(b). Additionally, in order to retain the right to rejoinder in accordance with the above policy, applicant is advised that the process claims should be amended during prosecution to require the limitations of the product claims. Failure to do so may result in a loss of the right to rejoinder. Further, note that the prohibition against double

patenting rejections of 35 U.S.C. 121 does not apply where the restriction requirement is withdrawn by the examiner before the patent issues. See MPEP § 804.01.

Information Disclosure Statement

5. The listing of references in the specification is not a proper information disclosure statement. 37 CFR 1.98(b) requires a list of all patents, publications, or other information submitted for consideration by the Office, and MPEP § 609.04(a) states, "the list may not be incorporated into the specification but must be submitted in a separate paper." Therefore, unless the references have been cited by the examiner on form PTO-892, they have not been considered.

Specification

6. Applicant is reminded of the proper content of an abstract of the disclosure.

A patent abstract is a concise statement of the technical disclosure of the patent and should include that which is new in the art to which the invention pertains. If the patent is of a basic nature, the entire technical disclosure may be new in the art, and the abstract should be directed to the entire disclosure. If the patent is in the nature of an improvement in an old apparatus, process, product, or composition, the abstract should include the technical disclosure of the improvement. In certain patents, particularly those for compounds and compositions, wherein the process for making and/or the use thereof are not obvious, the abstract should set forth a process for making and/or use thereof. If the new technical disclosure involves modifications or alternatives, the abstract should mention by way of example the preferred modification or alternative.

The abstract should not refer to purported merits or <u>speculative applications</u> of the invention and should not compare the invention with the prior art.

Art Unit: 1794

Where applicable, the abstract should include the following:

- (1) if a machine or apparatus, its organization and operation;
- (2) if an article, its method of making;
- (3) if a chemical compound, its identity and use;
- (4) if a mixture, its ingredients;
- (5) if a process, the steps.

Extensive mechanical and design details of apparatus should not be given.

- 7. The abstract of the disclosure is objected to because the last line refers the speculative applications of the invention (see above). Correction is required. See MPEP § 608.01(b).
- 8. The abstract of the disclosure is objected to because it contains more than one paragraph. Correction is required. See MPEP § 608.01(b).

The following guidelines illustrate the preferred layout for the specification of a utility application. These guidelines are suggested for the applicant's use.

Arrangement of the Specification

As provided in 37 CFR 1.77(b), the specification of a utility application should include the following sections in order. Each of the lettered items should appear in upper case, without underlining or bold type, as a section heading. If no text follows the section heading, the phrase "Not Applicable" should follow the section heading:

- (a) TITLE OF THE INVENTION.
- (b) CROSS-REFERENCE TO RELATED APPLICATIONS.
- (c) STATEMENT REGARDING FEDERALLY SPONSORED RESEARCH OR DEVELOPMENT.
- (d) THE NAMES OF THE PARTIES TO A JOINT RESEARCH AGREEMENT.
- (e) INCORPORATION-BY-REFERENCE OF MATERIAL SUBMITTED ON A COMPACT DISC.
- (f) BACKGROUND OF THE INVENTION.
 - (1) Field of the Invention.
 - (2) Description of Related Art including information disclosed under 37 CFR 1.97 and 1.98.

Art Unit: 1794

(g) BRIEF SUMMARY OF THE INVENTION.

- (h) BRIEF DESCRIPTION OF THE SEVERAL VIEWS OF THE DRAWING(S).
- (i) DETAILED DESCRIPTION OF THE INVENTION.
- (j) CLAIM OR CLAIMS (commencing on a separate sheet).
- (k) ABSTRACT OF THE DISCLOSURE (commencing on a separate sheet).
- (1) SEQUENCE LISTING (See MPEP § 2424 and 37 CFR 1.821-1.825. A "Sequence Listing" is required on paper if the application discloses a nucleotide or amino acid sequence as defined in 37 CFR 1.821(a) and if the required "Sequence Listing" is not submitted as an electronic document on compact disc).
- 9. The disclosure is objected to because of the following informalities: The specification does not contain the above-noted section headings and the letters of the title do not appear in the upper case.

Appropriate correction is required.

10. The use of the trademarks ESCOREZ, IRGANOX, IRGOFOS, SYLVARES and PERMALYN, *inter alia*, has been noted in this application. They should be capitalized wherever it appears and be accompanied by the generic terminology.

Although the use of trademarks is permissible in patent applications, the proprietary nature of the marks should be respected and every effort made to prevent their use in any manner which might adversely affect their validity as trademarks.

11. The lengthy specification has not been checked to the extent necessary to determine the presence of all possible minor errors. Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification.

Art Unit: 1794

Claim Objections

- 12. **Claims 2-8** are objected to because of the following informalities: In order to have proper antecedent basis, the current claims should be amended to "The adhesive film according to claim 1." Appropriate correction is required.
- 13. Claim 8 is objected to because of the following informalities: The use of the word "further" in the current claim should be omitted as the current claim depends from a claim, which has provided no initial limitations to the support layer. Appropriate correction is required.
- 14. **Claim 8** objected to because of the following informalities: Either "the" or "said" on line 4 should be omitted. Appropriate correction is required.

Claim Rejections - 35 USC § 112

- 15. The following is a quotation of the second paragraph of 35 U.S.C. 112:
 - The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.
- 16. **Claims 1-8** are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

17. A broad range or limitation together with a narrow range or limitation that falls within the broad range or limitation (in the same claim) is considered indefinite, since the resulting claim does not clearly set forth the metes and bounds of the patent protection desired. See MPEP § 2173.05(c). Note the explanation given by the Board of Patent Appeals and Interferences in Ex parte Wu, 10 USPO2d 2031, 2033 (Bd. Pat. App. & Inter. 1989), as to where broad language is followed by "such as" and then narrow language. The Board stated that this can render a claim indefinite by raising a question or doubt as to whether the feature introduced by such language is (a) merely exemplary of the remainder of the claim, and therefore not required, or (b) a required feature of the claims. Note also, for example, the decisions of Ex parte Steigewald, 131 USPQ 74 (Bd. App. 1961); Ex parte Hall, 83 USPQ 38 (Bd. App. 1948); and Ex parte Hasche, 86 USPO 481 (Bd. App. 1949). In the present instance, claim 1 recites the broad recitation "0.05" to 30 parts by weight," and the claim also recites "0.1 to 15.5 parts by weight" which is the narrower statement of the range/limitation; claim 3 recites the broad recitation "is less than 500 nm," and the claim also recites "is less than 200 nm" which is the narrower statement of the range/limitation; claim 5 recites the broad recitation "0.5 to 30 parts," and the claim also recites "1 to 15 parts by weight" which is the narrower statement of the range/limitation; claim 5 recites the broad recitation "0.05 to 3 parts by weight," and the claim also recites "0.1 to 1.5 parts by weight" which is the narrower statement of the range/limitation; claim 5 recites the broad recitation "0.1 to 30 parts by weight," and the claim also recites "0.1 to 15 parts by weight" which is the narrower statement of the range/limitation; claim 5 recites the broad recitation "0.1 to 6 parts by weight," and the claim also recites "0.2 to 3 parts by weight" which is the narrower

statement of the range/limitation; **claim 6** recites the broad recitation "multilayer," and the claim also recites "a monolayer and a trilayer" which is the narrower statement of the range/limitation;

- 18. **Claim 3** recites the limitation "the mean particle size" in line 2. There is insufficient antecedent basis for this limitation in the claim.
- 19. **Claim 4** recites the limitation "the aliphatic or alicyclic isocyanate type" in line 4; "the aziridine type" in line 4; "the carbodiimide type" in line 5; and "the epoxy type" in lines 5-6. There is insufficient antecedent basis for this limitation in the claim.

Regarding claim 4, the addition of the word "type" extends the scope of the claims so as to render them indefinite since it is unclear what "type" is intended to convey. The addition of the word "type" to the otherwise definite expression renders the definite expression indefinite by extending its scope. *Ex parte Copenhaver*, 109 USPQ 118 (Bd. App. 1955).

Regarding claim 8, the use of the word "intended" renders the claim indefinite as it is unclear from the claim limitations whether the polyolefins actually increase the bonding or whether they fail to do so.

20. **Claim 8** recites the limitation "the bonding" in line 3. There is insufficient antecedent basis for this limitation in the claim.

Art Unit: 1794

21. **Claim 8** recites the limitation "the adhesive layer" in line 3. There is insufficient antecedent basis for this limitation in the claim.

Regarding claim 8, the phrase "in particular" renders the claim indefinite as it is unclear what particulars are present or necessary in order for the stated copolymers to be chosen.

Claim Rejections - 35 USC § 102

22. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

- (a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.
- 23. Claims 1-2 and 6 are rejected under 35 U.S.C. 102(a) as being anticipated by Centner et al. (US 2004/0097638).

Regarding claim 1-2, Centner teaches aqueous dispersions of polymers and to PSA adhesives bases on said polymers (para 0008), said polymer synthesized from monomers (a), (b), (c), (d), (e) and (f) where (a) is vinyl acetate from 5 to 15% by weight (para 0019 and 0048); (b) is acrylic acid, methacrylic acid, itaconic acid, maleic acid, fumaric acid or maleic anhydride from 2 to 5% by weight (para 0049 and 0054); (c) is ethyl acrylate from 20 to 40% by weight (para 0050 and 0058); (d) is styrene from 0 to 8% by weight (para 0022, 0051 and 0060-0061); (e) is 2-ethylhexyl acrylate from 40 to 70% by weight (para 0052 and 0062-0063); and (f) are

crosslinkers from 0 to 10% by weight (para 0053 and 0066). Centner also teaches that the amounts by weight are always based in the polymer (para 0017) and that the polymers are prepared by emulsion polymerization (para 0068). Finally, Centner teaches aqueous polymer dispersions with solids contents of from 15 to 75 by weight (para 0900). The examiner notes that the limitations of claim 1 requires a mixture of 100 parts of an aqueous acrylic dispersion and 0.05 to 30 parts of a crosslinking system, but does not provide a compositional % for a solvent in relation to the other components. Given the claims their broadest reasonable interpretation, and bracketing the upper and lower bounds of the "solvent % by weight" by assuming that the dispersion contains no polymer (100 % solvent) and that the dispersion contains only polymer (0 % solvent), the % by weight given for crosslinker(s) (f) of the reference clearly anticipate those ranges as presently claimed and inherently provides, given that monomer (f) is a part of the polymer, for (f) to be incorporated into the aqueous phase. Centner continues to teach PSAs to join substrates (support layer) (para 0009).

Regarding claim 6, Centner teaches that the PSAs are especially suitable for producing self-adhesive articles such as adhesive films, e.g. protective films, said articles composed of a backing (monolayer) with a layer of adhesive applied to one or both sides and said backing material made of polymer films of polyolefins (para 0103-0105).

Art Unit: 1794

Claim Rejections - 35 USC § 103

24. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

- (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.
- 25. The factual inquiries set forth in *Graham* v. *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:
 - 1. Determining the scope and contents of the prior art.
 - 2. Ascertaining the differences between the prior art and the claims at issue.
 - 3. Resolving the level of ordinary skill in the pertinent art.
 - 4. Considering objective evidence present in the application indicating obviousness or nonobviousness.
- 26. Claim 3 are rejected under 35 U.S.C. 103(a) as being unpatentable over Centner et al. (US 2004/0097638 in view of Peters et al (US 6258888 B1).

Regarding claim 3, Centner teaches the aqueous dispersions of polymers and to PSA adhesives as in the rejection of claim 1 above. Centner also teaches a particle size distribution which is targeted for a low viscosity (para 0091, lines 13-14). Centner fails to teach a mean particle size is less than 500 nm, preferably less than 200 nm.

However, Peters teaches aqueous polymer emulsions (title) comprising particles with a <u>weight</u> average particle diameter (i.e. size) of from 30 to 180 nm and 180 to 500 nm (column 8, lines 15-

20). Peters also teaches that it is known to achieve high solids content in a polymer emulsion concomitant with acceptable low viscosity by arranging for the polymer to have a polymodal size distribution (PSD) and a broad PSD (i.e. Gaussian) is also a considered polymodal (column 2, lines 4-17).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to combine the aqueous polymer emulsions as taught by Centner with the particle sizes and distributions as taught by Peters towards an aqueous polymer dispersion pressure sensitive adhesive formulation with increased solids contents and low viscosity, providing an solution requiring less solvent while simultaneously allowing for easier coating of the emulsion on a substrate as in the present invention.

27. Claims 4-5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Centner et al. (US 2004/0097638 in view of Peters et al (US 6258888 B1).

Regarding claims 4-5, Centner teaches the aqueous dispersions of polymers and to PSA adhesives as in the rejection of claim 1 above. Centner fails to teach the crosslinkers as recited in current claim 4 and the compositional percentages of the crosslinkers as recited in current claim 5.

However, Peters teaches aqueous polymer emulsions (title) with the aqueous emulsion polymer system comprising polymers of the (meth)acrylates (i.e. Table 2), said polymers possess

functional groups for imparting latent <u>crosslinkability</u>, said functional group is an <u>epoxy</u> (column 14, lines 7-15).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to combine the teachings of Centner and Peters providing an aqueous polymer emulsion for pressure-sensitive adhesives with crosslinking agents as it is well known in the art that said agents provide enhanced cohesion and to adjust the % weight of the crosslinking agents for the intended application since it has been held that discovering an optimum value of a result-effective variable involves only routine skill in the art (*In re Boesch*, 617 F.2d 272, 205 USPQ 215 (CCPA 1980)) towards a pressure sensitive adhesive composition for a pressure-sensitive adhesive layer with a cohesion strength as dictated by application as in the present invention.

28. Claims 7-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Centner et al. (US 2004/0097638 in view of Nakagawa et al. (US 6586090 B2).

Regarding claims 7-8, Centner teaches the aqueous dispersions of polymers and to PSA adhesives as in the rejection of claim 1 (and 6) above. Centner also teaches a backing made from polymer films of polyolefins (para 0104). Centner fails to teach a support layer comprising the polymers of current claims 7 and 8.

However, Nakagawa teaches an adhesive tape and substrate for adhesive tape (title), wherein the substrate comprises component A and component B (column 4, lines 1-7), said component A is, *inter alia*, an ethylene-acrylic acid copolymer (column 4, lines 38-67, specifically lines 66-67, and column 5, lines 1-8), which imparts flexibility and stretchability to a substrate (column 4, lines 18-21); said component B is a polymer comprising, *inter alia*, polypropylene and ethylene (column 5, lines 9-46, specifically, lines 43-46), which suppresses thermal deformation of a substrate (column 5, lines 9-15); and said adhesive tape has an adhesive layer with acrylic type and emulsion type adhesives (column 8, lines 45-49).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to provide the backing films as taught by Centner with the propylene/ethylene copolymers and ethylene-acrylic acid copolymers as taught by Nakagawa, which would inherently provide increased bonding between the backing films and acrylic adhesive layers as presently claimed, towards and adhesive tape with a support backing with suppression of deformation due to heat while maintaining tape flexibility and stretchability as in the present invention.

Conclusion

29. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Reference DE 10141502 (English equivalent US 2003/0072906) as annotated on the ISA search report, discloses "AcResin UV" but does not disclose the specific AcResin 258 UV model as recited in the search report, nor is said ~258 model an aqueous acrylic dispersion.

Art Unit: 1794

Any inquiry concerning this communication or earlier communications from the

examiner should be directed to FRANK D. DUCHENEAUX whose telephone number is

(571)270-7053. The examiner can normally be reached on M-Th, 7:30 A.M. - 5:00 P.M..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Callie E. Shosho can be reached on (571)272-1123. The fax phone number for the

organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent

Application Information Retrieval (PAIR) system. Status information for published applications

may be obtained from either Private PAIR or Public PAIR. Status information for unpublished

applications is available through Private PAIR only. For more information about the PAIR

system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR

system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would

like assistance from a USPTO Customer Service Representative or access to the automated

information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

FDD

/Callie E. Shosho/

Supervisory Patent Examiner, Art Unit 1794